

REMARKS

In light of the following remarks, reconsideration of the present application is respectfully requested. Claims 1-3, 6, 8-15, 17-18 and 21-23 are pending.

Rejections under 35 U.S.C. § 103

1. Claims 15, 22, 1-3, 9-10, 14, and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer et al. (US 6,556,695), hereinafter "Packer," in view of Leiper (US 6,128,002) hereinafter "Leiper," and further in view of Rose (US 2002/0176608), hereinafter "Rose," Hemler et al. (A System for Multimodality Image Fusion), hereinafter "Hemler," Maurincomme et al. (US 2001/0036303), "Maurincomme" and Webler (US 2007/0055142), "Webler." Applicants traverse this rejection for the following reasons.

In order to set forth a *prima facie* case of obviousness under 35 U.S.C. § 103(a), the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 282 U.S. 1, 17 (1966), including identifying differences between the claimed invention and the prior art. Each limitation of a claim must be given weight in this determination in order to determine whether the "subject matter as a whole would have been obvious." 35 U.S.C. § 103(a). In combining references and accounting for differences between a claim and the applied art, the Examiner must provide "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 1741 (2007).

DISCUSSION OF ROSE

Rose is directed to a non-contact road surface profiling method using light. Rose focuses primarily upon road surfaces. However, as per Rose, the discussion applies equally to any surface intended for vehicular traffic. According to Rose, these surfaces include, but are not limited to, highways, roads, ramps, parking, and service areas for ground vehicles (trucks, cars, busses, etc.), runways, taxiways, parking aprons, and hangar floors for aircraft, and tracks and roadbeds for railroads. The terms "road" and "road surface," as used herein, refer specifically to "a road" and "a surface of a road," respectively, and refer generally to "a way or course for ground, air, or rail vehicles" and "a surface of a way or course," respectively.

ROSE IS NOT ANALOGOUS ART

A reference qualifies as prior art for an obviousness determination under § 103 **only when it is analogous to the claimed invention**. *In re Klein*, Appeal No. 2010-1411, June 6, 2011 citing *Innovention Toys, LLC, v. MGA Entertainment, Inc.*, No. 2010-1290, slip op. at 12 (Fed. Cir. Mar. 21, 2011); *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004); *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992).

There are two separate tests used to define the scope of analogous prior art:

- (1) "whether the art is from the same field of endeavor, regardless of the problem addressed and,"
- (2) "if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved." *Bigio*, at 1325.

Rose relates to any surface intended for vehicular traffic, primarily road surfaces. See Rose, ¶ [0002]. "These surfaces include, but are not limited to,

highways, roads, ramps, parking, and service areas for ground vehicles (trucks, cars, busses, etc.), runways, taxiways, parking aprons, and hangar floors for aircraft, and tracks and roadbeds for railroads.” *Id.* In contrast, the present application relates to visually assisting applications in the heart. Moreover, claim 1 is directed to a “method for visually supporting an electrophysiology catheter application in the heart.” Thus, Rose is not in the same field of endeavor as the present application.

“A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.” *Clay*, 966 F.2d at 659. “If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection.” *Id.*

In Rose, problems being addressed include the disadvantage that a rut-bar profiler limits a maximum speed of a vehicle having the rut-bar profiler (paragraph [0015]). Another listed problem being addressed is that a laser range finder is not generally safe for the eyes (paragraphs [0018] and [0024]). A further problem is one where the resultant capture profile is irrelevant to the actual road profile because of an optical-line profiler (paragraph [0025]). In contrast, a problem being addressed in the present application is orientation during guidance of a catheter during a catheter application. For example, claim 1 recites a method for “visually supporting an electrophysiology catheter application in the heart.”

Thus, the road surface-profiling system of Rose is not a reference which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem. As such, Rose is not reasonably pertinent to the particular problem being addressed in the present application.

Because Rose fails both of the tests identified in establishing whether a reference is analogous prior art, Rose fails to qualify as a prior art reference and therefore the Examiner is requested to withdraw the rejection .

THE COMBINATION OF PACKER AND ROSE IS IMPROPER

The sections of Rose cited by the Examiner are reproduced below.

[0005] In the industry, road condition is measured by profiling. Profiling is the obtaining of a profile or series of profiles of the road surface. A profile is substantially a cross-sectional view of the surface of the road. A profile depicts the contours of the road, thereby demonstrating the form, wear, and irregularities of the road surface.

[0006] A transverse profile is a cross-sectional view of the road surface or a portion thereof taken substantially perpendicular to the direction of travel. A transverse profile may be used to depict rutting, potholes, scaling, chipping, and edge damage of the road surface over time.

[0007] A longitudinal profile is a cross-sectional view taken substantially in the direction of travel. A longitudinal profile may be used to depict the grade, waviness, and roughness of the road surface. Longitudinal profiles may be used to monitor the wear of the road surface over time to facilitate maintenance planning.

(Emphasis Added).

Absolutely nowhere in Rose is it mentioned that the techniques disclosed therein can be used in the field of medical imaging. Thus, nowhere in Rose is it disclosed that the device disclosed therein can be modified to image living organisms, or, rather, “extract at least significant portions of an area to be treated by segmenting the 3D image data,” as claimed. Accordingly, although Rose is directed to an imaging method, Rose is not directed to any medical imaging method that “[extracts] 3D surface profiles of objects in an area to be treated,” as claimed. On the other hand, Packer is directed to a completely different technological field of medical imaging. It

would not be obvious for one of ordinary skill in the art dealing with electroanatomical mapping or endocardial ablation to rely on Rose which deals with two-dimensional surface profiling of roads.

Consequently, the combination of Packer and Rose is not obvious and is based on improper hindsight reconstruction gleaned from viewing Applicants' specification and reading the claims, and not on a reason with some rational underpinnings for combining Packer and Rose. Rose is not interested in the 3D surface profiling of organs of living organisms. The Examiner has provided no evidence or reasoning that Rose appears to be interested in producing 3D surface profiles of organs of living organisms.

Accordingly, the combination of Packer and Rose is not an obvious combination of prior art elements or a simple substitution of one known element for another, leading to predictable results, or any other indicator of potential obviousness. Rather the extensive amount of modification needed is suggested nowhere in the cited references or by the Examiner, and is born from use of impermissible hindsight reconstruction in view of the Applicants' Specification and reading of the claims. (See, for example, *Ex parte* Kobayashi, Appeal 2009-000884, Application 10/031,282).

The alleged combination of Packer and Rose is improper and, even if combined (which is not admitted), the combination fails to render the limitation of independent claim 15, and the somewhat similar features recited in independent claim 1 obvious to one of ordinary skill in the art.

LEIPER, HEMLER, MAURINCOMME AND WEBLER FAILS TO REMEDY THE DEFICIENCIES OF
PACKER AND ROSE

Even assuming Leiper, Hemler, Maurincommé and Webler could be combined with Packer (which Applicants do not admit), Leiper, Hemler, Maurincommé and Webler fail to overcome the noted deficiencies of Packer and Rose. For at least all the above reasons, the proposed combination of Packer, Leiper, Rose, Hemler, Maurincommé and Webler fails to render each and every limitation of claim 15 and the somewhat similar features recited in independent claim 1 obvious to one of ordinary skill in the art. Claims 2-3, 9-10, 14-15, 18 and 22, dependent on one of independent claims 1 and 15, are patentable for the reasons stated above with respect to claims 1 and 15, as well as for their own merits.

Applicants, therefore, respectfully request that the rejection to claims 15, 22, 1-3, 9-10, 14 and 18 under 35 U.S.C. § 103(a) be withdrawn.

ARGUMENTS AGAINST THE COMBINATION OF PACKER, LEIPER, ROSE, HEMLER, MAURINCOMME
AND WEBLER

Applicants submit that one skilled in the art who studies Packer and attempts to combine Packer with the other five cited references would not arrive at the subject matter of Applicants' claim 1 and 15, and request the Examiner review the following materials regarding the combination of the six different references.

Initially, Applicants note that MPEP § 2143 specifically states the following:

To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention **"as a whole"** would have been obvious at that time to that person. (Emphasis Added).

The “as a whole” prevents evaluation of the invention on a part-by-part basis. Without this important requirement, an obviousness assessment might break an invention into its component parts, then find a prior art reference corresponding to each component. This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components. See Ruiz v. A.B. Chance, Co., 357 F.3d 1270, 1275 (Fed. Cir. 2004); 69 USPQ2d 1686, 2691 (Fed. Cir. 2004).

While the combination of six different references to reject the independent claims is not *per se* impermissible, Applicants note the number of references required would seem to indicate that the rejection is based on decomposing the claim and using improper hindsight analysis or ex post analysis.

Applicants respectfully submit that by using a combination of six different references the Examiner is over-estimating the capabilities of a person of *ordinary skill* in the art. Applicants submit that absent impermissible hindsight analysis, one skilled in the art at the time the invention was made could not and would not combine the teachings of the six different references of Packer, Leiper, Rose, Hemler, Maurincomme and Webler in the precise manner required to render obvious all of the features of independent claims 1 and 15.

2. Claims 17, 21, and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Rose, Hemler, Maurincomme, Webler and Williams et al. (DE 19953308-A1), hereinafter “Williams”.

The Examiner correctly acknowledges that the features of claims 17, 21, and 6 are absent from Packer, Leiper, Rose, Hemler, Maurincomme and Webler, but alleges that these features are taught by Williams, thereby rendering claims 17, 21, and 6

obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claims 17, 21, and 6 are taught by Williams (which Applicants do not admit) and that Williams could be properly combined with Packer, Leiper, Rose, Hemler, Maurincomme and Webler (which Applicants do not admit), Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Williams are still deficient with respect to the above-described features of claims 15 and 1. Thus, even in combination, Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Williams fail to render claims 17, 21, and 6 obvious.

3. Claims 23 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Rose, Hemler, Maurincomme, Webler and Hughes et al. (US 7,233,340), hereinafter "Hughes."

The Examiner correctly acknowledges that the features of claims 23 and 13 are absent from Packer, Leiper, Rose, Hemler, Maurincomme and Webler, but alleges that these features are taught by Hughes, thereby rendering claims 23 and 13 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claims 23 and 13 are taught by Hughes (which Applicants do not admit) and that Hughes could be properly combined with Packer, Leiper, Rose, Hemler, Maurincomme and Webler (which Applicants do not admit), Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Hughes are still deficient with respect to the above-described features of claims 15 and 1. Thus, even in combination, Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Hughes fail to render claims 23 and 13 obvious.

4. Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Rose, Hemler, Maurincomme, Webler and Schweikard et al. (US 6,144,875), hereinafter "Schweikard."

The Examiner correctly acknowledges that the features of claim 8 are absent from Packer, Leiper, Rose, Hemler, Maurincomme and Webler, but alleges that these features are taught by Schweikard, thereby rendering claim 8 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claim 8 are taught by Schweikard (which Applicants do not admit) and that Schweikard could be properly combined with Packer, Leiper, Rose, Hemler, Maurincomme and Webler (which Applicants do not admit), Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Schweikard are still deficient with respect to the above-described features of claim 1. Thus, even in combination Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Schweikard fail to render claim 8 obvious.

5. Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Rose, Hemler, Maurincomme, Webler and Krishnan (US 6,771,262), hereinafter "Krishnan".

The Examiner correctly acknowledges that the features of claim 11 are absent from Packer, Leiper, Rose, Hemler, Maurincomme and Webler, but alleges that these features are taught by Krishnan, thereby rendering claim 11 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claim 11 are taught by Krishnan (which Applicants do not admit) and that Krishnan could be properly combined with Packer, Leiper, Rose, Hemler, Maurincomme and Webler (which Applicants do not admit), Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Krishnan are still deficient with respect to the above-described features of

claim 1. Thus, even in combination, Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Krishnan fail to render claim 11 obvious.

6. Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Rose, Hemler, Maurincomme, Webler and Massaro et al. (US 2002/0087329), hereinafter "Massaro."

The Examiner correctly acknowledges that the features of claim 12 are absent from Packer, Leiper, Rose, Hemler, Maurincomme and Webler, but alleges that these features are taught by Massaro, thereby rendering claim 12 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claim 12 are taught by Massaro (which Applicants do not admit) and that Massaro could be properly combined with Packer, Leiper, Rose, Hemler, Maurincomme and Webler (which Applicants do not admit), Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Massaro are still deficient with respect to the above-described features of claim 1. Thus, even in combination, Packer, Leiper, Rose, Hemler, Maurincomme, Webler and Massaro fail to render claim 12 obvious.

CONCLUSION

In view of the above remarks, the Applicants respectfully submit that each of the pending objections and rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

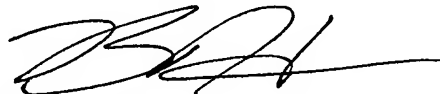
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Donald J. Daley at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKY, & PIERCE, P.L.C.

By



Donald J. Daley, Reg. No. 34,313
Blair M. Hoyt, Reg. No. 56,205

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

DJD/BMH/mas